

CYLINDER MASS AIR FLOW PREDICTION MODEL

ABSTRACT OF THE DISCLOSURE

A vehicle system includes a throttle position sensor that generates a current throttle position signal (TPS), a MAF sensor that generates a current actual MAF signal, and a manifold absolute pressure (MAP) sensor that generates a current actual MAP signal. A controller determines a current estimated cylinder air flow (CAF) signal, determines a MAF transient signal and determines a MAP transient signal. The controller determines a predicted CAF signal into the engine based on the current estimated CAF signal, the current actual MAF signal, the current MAP signal, a current TPS signal, the MAF transient signal and the MAP transient signal.